

V D F A C T S H E E T

INCIDENCE - The number of new cases occurring in a stated area during a specific time period, usually one year.

TABLE I

ACQUIRED SYPHILIS MINIMUM ANNUAL INCIDENCE ESTIMATES  
1936 - 1948

Fiscal Year	Method of Calculation	Civilians & Armed Forces	Continental US Civilians
1936-37	Survey (1)	---	259,000
1940-41	Survey (1)	---	173,000
1941	Morbidity Reports (2)	183,000	177,000
1942	"	206,000	192,000
1943	"	259,000	231,000
1944	"	247,000	201,000
1945	"	231,000	178,000
1946	"	261,000	202,000
1947	"	240,000	214,000
1948	"	193,000	178,000

Gonorrhea incidence is estimated as approximately five times the syphilis incidence.

PREVALENCE - The total number of cases of a disease existing in a stated area at any point of time.

1. In the first two million selectees examined, the prevalence rate for syphilis based on serologic testing was 45.3 per 1,000 men tested, the rate for white males was 17.4 per 1,000; for non-white males 252.3 per 1,000. (3)
2. In the age group 20-25 years the prevalence rate among non-white males was 19 times greater than among white males. In the 30-35 year age group the prevalence rate among non-white males was only 9 times greater than among white males (see following table) (3).

FEDERAL SECURITY AGENCY  
Public Health Service  
Venereal Disease Division  
Office of Statistics

PREVALENCE (continued)

TABLE II

## SYPHILIS DETECTED IN SELECTIVE SERVICE EXAMINATIONS

Age Group	Prevalence Rate per 1000 tested		
	White	Non-white	Total
21-25	10.1	191.2	30.1
26-30	20.9	293.7	54.4
31-35	37.7	357.2	85.2
Total	17.4	252.3	45.3

3. The prevalence of syphilis among examined sexual contacts of persons known to have primary or secondary syphilis is approximately 50% for male whites, 51% female whites, 55% male non-whites, and 59% for female non-whites. (4)

4. It is estimated that about 3 million persons in the United States have syphilis (all stages—primary, secondary, early latent, latent, late, congenital). (5)

MORBIDITY

TABLE III

DIAGNOSED CASES OF VENEREAL DISEASES REPORTED FOR THE FIRST TIME  
FISCAL YEARS 1941-48

(Known military cases are excluded)

Year	Primary and sec- ondary	Syphilis				Gonor- rhea	Other Venereal Diseases		
		Early Latent	Late and late latent	Congen- ital	Not stated		Chan- croid 1/	Granu- loma in- guinale	Lymphogranu- loma venereum
In States and Territories									
1941									
1942	68,319	108,864	201,939	17,952	83,252	193,032	3,278	648	1,347
1943	78,556	118,300	206,472	18,921	62,159	218,554	5,649	1,278	1,915
1944	84,629	150,703	256,908	17,942	65,915	280,923	8,502	1,750	2,408
1945	80,316	125,379	208,830	15,707	42,493	307,504	8,029	1,771	2,905
1946	78,649	104,930	146,475	14,730	23,365	293,694	5,623	1,869	2,699
1947	96,222	110,652	129,080	14,181	20,767	372,594	7,333	2,216	2,643
1948	107,772	111,499	124,551	14,127	24,476	409,793	9,356	2,413	2,740
	81,428	101,399	125,938	14,510	22,717	372,167	8,853	2,325	2,518
In Continental United States									
1941									
1942	67,958	108,658	201,190	17,592	82,443	191,306	3,265	647	1,345
1943	75,704	116,433	202,216	16,924	60,968	212,384	5,426	1,271	1,888
1944	82,230	148,909	252,995	16,173	64,611	275,648	8,333	1,746	2,391
1945	78,418	122,390	203,396	13,576	40,419	300,585	7,861	1,758	2,857
1946	77,007	101,135	142,731	12,339	23,103	284,994	5,481	1,846	2,625
1947	94,957	107,336	125,336	12,106	20,683	364,853	7,058	2,204	2,593
1948	106,594	107,755	122,257	12,284	24,406	400,659	9,039	2,403	2,688
	80,528	97,745	123,972	13,309	22,587	363,014	8,631	2,315	2,494
1/ Includes									

1/ Includes some unspecified "other venereal diseases"

Source: (2)

TABLE IV

## TREND OF SYPHILIS MORBIDITY REPORTING - U. S. CIVILIAN AND ARMED FORCES

1941 - 1948

Fiscal Year	Est. Pop. in Thou- sands 1/	Reported Cases					Rate per 1,000 Population				
		Total In- cluding Not Stated	Primary or Sec- ondary	All Early Syphilis P-S-E.L.	Con- geni- tal	Late and Latent	Total In- cluding Not Stated	Primary or Sec- ondary	All Early Syphilis P-S-E.L.	Con- geni- tal	Late and Latent
Continental U. S. Civilians											
1941	131,897	477,841	67,958	176,616	17,592	201,190	3,623	.515	1.339	.133	1.525
1942	131,943	472,245	75,704	192,137	16,924	202,216	3,579	.574	1,456	.128	1.533
1943	128,728	564,918	82,230	231,139	16,173	252,995	4,388	.639	1,796	.126	1.965
1944	127,028	458,199	78,418	200,808	13,576	203,396	3,607	.617	1,581	.107	1.601
1945	127,037	356,315	77,007	178,142	12,339	142,731	2,805	.606	1,402	.097	1.124
1946	133,543	360,918	94,957	202,293	12,106	125,836	2,703	.711	1,515	.091	0.942
1947	140,974	373,296	106,594	214,349	12,284	122,257	2,648	.756	1,520	.087	0.867
1948	144,184	338,141	80,528	178,273	13,309	123,972	2,345	.559	1.236	.092	0.860
Total Civilian and Armed Forces											
1941	132,638	483,897	74,014	182,672	17,592	201,190	3,648	.558	1.377	.133	1.517
1942	133,953	486,104	89,563	205,996	16,924	202,216	3,629	.669	1.538	.126	1.510
1943	135,646	592,941	110,253	259,162	16,173	252,995	4,371	.813	1.911	.119	1.865
1944	137,368	504,155	124,374	246,764	13,576	203,396	3,670	.905	1.796	.099	1.481
1945	138,923	409,116	129,808	230,943	12,339	142,731	2,945	.934	1.662	.089	1.027
1946	140,387	420,360	154,399	261,735	12,106	125,836	2,994	1.100	1,864	.086	0.896
1947	142,673	399,589	132,887	240,642	12,284	122,257	2,801	.931	1.687	.086	0.857
1948	145,434	353,393	95,780	193,525	13,309	123,972	2,430	.659	1.331	.092	0.852

1/ As of January 1 (mid-point of fiscal year).

Source: (6)

TABLE V

## CASES REPORTED UNDER TREATMENT FOR THE FIRST TIME - U. S. AND TERRITORIES

Fiscal Year 1948

Source	Color & Sex		Syphilis								Gran- uloma Ingui- nale	Lympho- granu- loma
			Total	Pri. & Sec.	Early Latent	Late & Late Latent	Con- geni- tal	Not Stated	Gono- rrhea	Chan- croid		
Pri- vate Physi- cians	White <u>1/</u>	Male	35,241	7,619	4,910	15,284	820	6,608	30,880	289	12	26
		Female	30,655	5,399	6,466	13,144	1,500	4,146	9,321	43	8	4
	Non- White	Male	24,508	4,255	5,934	10,481	261	3,577	16,414	126	48	51
		Female	34,818	5,329	10,850	13,506	447	4,686	5,654	28	29	29
	TOTAL		125,222	22,602	28,160	52,415	3,028	19,017	62,269	486	97	110
Clinics, Hospitals, or other Insti- tutions	White <u>1/</u>	Male	37,782	13,068	7,998	14,052	1,753	911	56,809	1,846	73	160
		Female	30,841	7,956	10,736	9,181	2,468	500	34,631	199	20	37
	Non- White	Male	69,901	19,918	20,883	24,560	3,299	1,241	155,580	5,180	1,258	1,711
		Female	82,246	17,884	33,622	25,730	3,962	1,048	62,878	1,142	877	500
	TOTAL		220,770	58,826	73,239	73,523	11,482	3,700	309,898	8,367	2,228	2,408
GRAND TOTAL			345,992	81,428	101,399	125,938	14,510	22,717	372,167	8,853	2,325	2,518

1/ Includes unknown color.

Source: (2)

$$\begin{array}{r} 2518 \\ 3 \\ \hline 7554 \end{array}$$

$$\begin{array}{r} 2325 \\ 5 \\ \hline 11625 \end{array}$$

$$\begin{array}{r} 2325 \\ 4 \\ \hline 9300 \end{array}$$

$$\begin{array}{r} 20 \\ 93 \\ \hline 113 \end{array} \quad \begin{array}{r} 20.5 \\ 2325.00 \\ 226 \\ \hline 650 \end{array}$$

TABLE VI

(Continental U. S. Civilians)

Year	Syphilis Mortality rates per 100,000 population	Infant Mortality Rates due to syphilis per 1,000 live births	Admission rates to mental hospitals due to syphilis per 100,000 population
	Source : (7)(8)(10)	Source: (9) (10)	Source: (11)
1933	15.1	.79	6.9
1934	15.9	.74	7.0
1935	15.4	.70	7.0
1936	16.2	.73	7.1
1937	16.1	.69	7.1
1938	15.9	.63	7.2
1939	15.0	.57	7.3
1940	14.4	.53	6.3
1941	13.3	.41	6.5
1942	12.2	.30	6.4
1943	12.1	.25	6.0
1944	11.3	.27	5.8
1945	10.7	.25	5.7
1946	9.3	.16	5.0
1947 (est.)	8.9	-	-

TABLE VII

NUMBER OF DEATHS REPORTED (1946) AND NUMBER OF MENTAL  
HOSPITAL ADMISSIONS (1945), DUE TO SYPHILIS  
(Continental U. S. Civilians)

Cause	Total Deaths 1946			Infant Deaths 1946			Mental Hospital Admissions 1945
	Total	White	Non-white	Total	White	Non-white	
Syphilis - All Forms	12955	8240	4715	538*	193	345	7576
Paresis	4028						6496
Tabes Dorsalis	486						
Aortic Aneurysm	2943						
All other forms	5498						1080



1. Annual Appropriations for VD Control

Fiscal year 1948 <u>22/</u>	Federal	-	\$17,192,310
	State	-	6,769,243
	Local and Private	-	<u>7,394,416</u>
	Total	-	\$31,355,969
Estimate fiscal year 1949 <u>5/</u>	Total	-	\$31,500,000
  
2. Venereal Disease Disability in Man-Years

Hospitalization for Syphilis Treatment (Fiscal 1947) <u>16/</u>		3,890
Hospitalization for Gonorrhea Treatment (fiscal 1947) <u>16/</u>		64
Hospitalization for Syphilis Insanity (1944) <u>23/</u>		25,450
Disability from Cardiovascular Syphilis (1945) <u>5/</u>		7,820
Disability from Locomotor Ataxia (1945) <u>5/</u>		5,070
Disability from Syphilitic Blindness (1946) <u>5/</u>		13,400
  
3. Economic Cost of Paresis and Syphilitic Blindness

Maintenance of Paretics (1940) <u>24/</u>		\$ 11,000,000
Loss of Income by Male Paretics (1940) <u>24/</u>		112,000,000
Maintenance of Syphilitic Blind (1939) <u>25/</u>		4,000,000
Loss of Income by Syphilitic Blind (1939) <u>25/</u>		6,000,000
  
4. Syphilitic Loss of Life in Man-Years (1944)

White <u>26/</u>	-	201,000
Non-white <u>27/</u>	-	<u>150,000</u>
Total population	-	351,000
  
5. 75% of previously untreated primary and secondary cases diagnosed by clinics are referred to in-patient facilities for treatment, about 59% of primary and secondary cases reported by all sources are given in-patient treatment. (2) (12)
  
6. About 2/3 of the patients diagnosed by clinics as primary and secondary cases, volunteered for diagnostic observation. About 25% of the primary and secondary cases diagnosed by clinics are brought to treatment because of contact investigation. (13)
  
7. About 20% of the persons given diagnostic observation for venereal disease by clinics are found to be infected with one or more diseases. (2)
  
8. An average of 2.25 contacts per patient is obtained by Health Departments from diagnosed primary and secondary cases. (14)
  
9. Contact investigation brings to treatment about 17 new early lesion cases per 100 early lesion cases diagnosed. (14)

PENICILLIN IN THE TREATMENT OF SYPHILIS - Early Syphilis - Only 30 percent of

patients with early syphilis admitted to clinics for routine therapy received the minimum protective regimen of 20 arsenical injections together with heavy metals (15)

Under present penicillin schedules for in-patients (ranging in duration from 4 to 14 days), 99 percent complete treatment. (16)

TABLE VIII

COMPARATIVE EFFECTIVENESS OF PENICILLIN SCHEDULES  
IN THE TREATMENT OF SECONDARY SYPHILIS

Schedule of Penicillin Therapy	Results 12-15 months posttreatment			
	Total cases observed	Cumulative percent re-treated	Percent sero-positive	Percent sero-negative
1,200,000 units of penicillin plus 5 arsenoxide and 3 bismuth (9 days)	1,472	14	29	57
4,800,000 units penicillin in oil-beeswax (8 days)	381	15	15	70
1,200,000 units of penicillin plus 320 m. g. arsenoxide (8 days)	470	17	15	68
2,400,000 units of penicillin Amorphous (4 & 8 days) Crystalline G (8 days)	539	20	16	64
	213	17	9	74
1,200,000 units of penicillin (4 & 8 days)	617	23	15	62

Source: (18)

TABLE IX

COMPARATIVE TOXICITY OF PENICILLIN ALONE AND PENICILLIN  
COMBINED WITH ARSENOXIDE

Treatment for Syphilis (all diagnoses)	Total Cases Reported	Severe Reactions per 1,000	Deaths
Penicillin alone	83,411	5.0	0
Penicillin plus arsenoxide	149,114	12.7	18

Source: (18)

PENICILLIN IN THE TREATMENT OF SYPHILIS (continued)

Congenital Syphilis - There is a significantly greater percentage of patients with satisfactory progress among children treated at less than 6 months of age than among children treated at 6 months to 2 years of age or children treated at 2 years of age or over.

TABLE X

Age of Child at Time of Treatment	Satisfactory Progress	Unsatisfactory Progress
	6 to 18 Months Posttreatment	6 to 18 Months Posttreatment
Less than 6 months	95.7 percent	4.3 percent
6 months - 1 year 11 months	75.0 percent	25.0 percent
2 years and over	61.4 percent	38.6 percent

Source: (18)

Syphilis in Pregnancy - Penicillin therapy among pregnant syphilitic women is very effective in preventing congenital syphilis.

Penicillin therapy administered as late as the third trimester is more than seven times as effective as weekly injections of arsenicals and heavy metal started after the fifth month of pregnancy; more effective than routine injections of 10 or more arsphenamine and 10 or more heavy metals started before the fifth month.

TABLE XI

OUTCOME OF PREGNANCY BY STAGE OF DISEASE  
AT THE TIME OF MOTHER'S TREATMENT

Stage of Disease at Time of Mother's Treatment with Penicillin	Percent of Total Live Births	
	Congenital Syphilis	Non-Syphilitic
All Diagnoses	3.5	96.5
Primary & Secondary	4.2	95.8
Early Latent	2.1	97.9

Source: (18)



# PENICILLIN IN THE TREATMENT OF GONORRHEA

TREATMENT SCHEDULE	PERCENT CURE*	SOURCE
200,000 units - Single injection - Calcium Penicillin in peanut oil and 4.8% beeswax	92	(18)
200,000 units - 3 injections in 2 hrs. - Sodium Penicillin aqueous (50,000 - 50,000 - 100,000)	94	(19)
200,000 units - 4 injections in 3 hrs. - Sodium Penicillin aqueous (40,000 - 40,000 - 40,000 - 80,000)	96	(19)
200,000 units - 3 injections in 2 hrs. - Crystalline G Penicillin aqueous (50,000 - 50,000 - 100,000)		(20)
Given by intramuscular needle injection	97.9	
Hypospray Administration	97.5	

\* Clinically and bacteriologically free of infection, i. e., without signs or symptoms and with three or more cultures - all negative - during the observation period.

References Cited

- (1) N. Y. State J. Med.; Oct. 1, 1943; Vol. 43, No. 19, pp. 1825-1829.
- (2) Tabulated by the Program Evaluation Section, VD Division, based on PHS Form 8958-B and/or 8954-A.
- (3) J.A.M.A., Dec. 26, 1942; Vol. 120, pp. 1309-1372.
- (4) J. Ven. Dis. Inform., Aug. 1948; Vol. 29, p. 231.
- (5) Unpublished estimate Venereal Disease Division.
- (6) PHS Form 8958-B; Census Bureau: Special Population Reports, Series P-46, No. 6; p.-25, Nos. 3 & 13; Incidence of VD in U.S. Army Troops, Jan. 1940-June 1947, Medical Statistics Div. Dept. of the Army; Health of the Army, Vol. 2, No. 4, Vol. 3, Nos. 4,5,6,7; Annual Report of the Surgeon General, U. S. Navy 1941-43; Unpublished Data, Medical Statistics Div., BUMED, Dept. of the Navy; Statistics of Navy Medicine, Vol. 1 through Vol. 4, No. 9.
- (7) Census Bureau; Population Releases; Mortality Statistics of the U. S. 1933-1936; Vital Statistics of the U. S. 1937-1944.
- (8) National Office of Vital Statistics: Current Mortality Analysis; Vol. 4, No. 13; Vol. 5, No. 12.
- (9) Census Bureau: Birth, Stillbirth, and Infant Mortality Statistics 1933-1936; Vital Statistics of the U. S. 1937-1944.
- (10) National Office of Vital Statistics: Vital Statistics of the U. S. 1945; U. S. Summary of Vital Statistics 1946 Vol. 28, No. 1. Deaths and Death Rates 1944-46 Vol. 29, No. 2.
- (11) Census Bureau: Population Releases; Patients in Mental Institutions, 1933-1944; 1945 Current Pop. Reports, Mental Institutions Series, P-85, No. 14.
- (12) Supplement to monthly mimeographed report "Admissions to Rapid Treatment Centers and other In-Patient Care Facilities" July 1948, VD Division.
- (13) Statistical Letter, VD Division, Oct. - Dec. 1947.
- (14) Statistical Letter, VD Division, Jan. - March 1948.
- (15) J. Ven. Dis. Inform., August 1945, p. 171.
- (16) Form VD 3 - Summarization unpublished.
- (17) J. Ven. Dis. Inform., April 1948, pp. 103-106.
- (18) Unpublished data Medical Statistics Section, Venereal Disease Division.
- (19) J. Ven. Dis. Inform., May 1945, pp. 98-103.
- (20) J. Ven. Dis. Inform., Sept. 1946, pp. 225-228.
- (21) J. Ven. Dis. Inform., March 1948, pp. 61-63.
- (22) State budgets submitted to PHS Bureau of State Service.
- (23) Calculated from number of discharges and deaths and length of stay in State hospitals - "Patients in Mental Institutions". Census Bureau 1944. Estimate for other hospitals included and based on State hospital data.
- (24) J. Ven. Dis. Inform., August 1945, pp. 175-183.
- (25) J. Ven. Dis. Inform., April 1939, pp. 91-95.
- (26) J. Ven. Dis. Inform., July 1948, pp. 193-200.
- (27) Calculated from Vital Statistics of the U. S. - 1944 and Provisional U. S. Life Tables - 1945. Calculation by VD Division, PHS.